

Appl. No. 10/025,528  
Amdt. dated February 4, 2004  
Reply to Office Action of November 12, 2003

## REMARKS/ARGUMENTS

Applicants acknowledge receipt of the Office Action dated November 12, 2003. In that action, the Examiner: 1) rejected claims 1-52 as allegedly indefinite; and 2) provisionally rejected claims 1-58 as allegedly claiming the same invention as co-pending application No. 10/027,749.

With this Office Action Response, Applicants amend claims 1, 11, 14, 20, 23, 24, 33, 36, 38 and 41. Applicants believe the pending claims are allowable and respectfully request reconsideration.

### I. PROVISIONAL STATUTORY DOUBLE PATENTING REJECTIONS

Claims 1-52 stand provisionally rejected for alleged statutory double patenting. The Manual of Patenting Procedures (MPEP) Section 804(II)(A) sets forth a test for use in determining whether double patenting is present:

A reliable test for double patenting under 35 U.S.C. 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. ... **Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist.**

MPEP 804(II)(A)(emphasis added, internal citations omitted). Originally present claim 1 of the present application is reproduced below for convenience of the discussion:

1. A method of determining characteristics of an earth formation traversed by a borehole, the method comprising:
  - transmitting acoustic energy into the earth formation from within the borehole;
  - receiving at least some of the acoustic energy to create a plurality of received waveforms;
  - estimating source waveforms from the received waveforms to create estimated source waveforms; and
  - comparing the estimated source waveforms to determine a characteristic of the earth formation.

Originally presented claim 1 of the co-pending application serial no. 10/027,749 is also reproduced for convenience of the discussion:

1. A method of determining characteristics of an anisotropic earth formation, the method comprising:
  - transmitting acoustic energy into the earth formation, and wherein the earth formation breaks the acoustic energy into a fast polarization shear wave and a slow polarization shear wave;
  - receiving composite waveforms comprising components of both the fast and slow polarization shear waves;
  - decomposing the composite waveforms into decomposed waveforms;
  - estimating source waveforms from the decomposed waveforms to create estimated source waveforms; and
  - comparing the estimated source waveforms to determine characteristics of the anisotropic earth formation.

“Is there an embodiment that falls within the scope of one claim, but not the other?” The question must be answer in the affirmative. If the method is performed in an isotropic earth formation, then claim 1 of the co-pending application serial no. 10/027,749 would not be infringed for failure to fulfill the limitations of at least the transmitting, receiving and decomposing steps. The MPEP provides an example of a similar situation where statutory double patenting would not be proper.

For example, the invention defined by a claim reciting a compound having a “halogen” substituent is not identical to or substantively the same as a claim reciting the same compound except having a “chlorine” substituent in place of the halogen because “halogen” is broader than “chlorine.”

MPEP 804(II)(A).

## **II. CLAIM REJECTIONS**

Applicants amend independent claims 1 and 23 to more clearly state that the comparison delineated is a comparison of the estimates source waveforms to each other. The amendments to claims 11, 14, 20, 24, 33, 36, 38 and 41 are merely to reflect the amendment to their respective independent claims. These amendments are to address the Examiner’s Section 112 concerns, and not to define over any prior art.

Based on the foregoing, Applicants respectfully submit that the Section 112 rejections of claims 1-52 have been addressed, and the claims are now in a condition for allowance.

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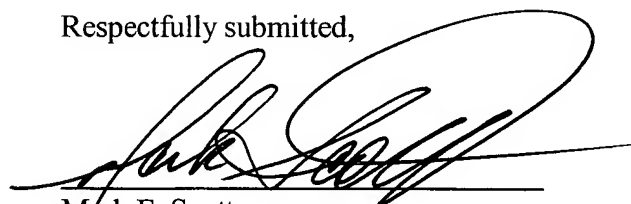
### III. CONCLUSION

Applicants respectfully request reconsideration, allowance of the pending claims and a timely Notice of Allowance be issued in this case. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769.

Respectfully submitted,



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